



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,135	01/22/2004	Asit Dan	SVL920030092US1(110872002	6420
45726 7590 12/23/2008 Caesar, Rivise, Bernstein, Cohen & Pokotilow Ltd. 11th Floor, Seven Penn Center Philadelphia, PA 19103				
EXAMINER				
PARK, JEONG S				
ART UNIT		PAPER NUMBER		
2454				
MAIL DATE		DELIVERY MODE		
12/23/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/763,135

Applicant(s)

DAN ET AL.

Examiner

JEONG S. PARK

Art Unit

2454

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/19/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/19/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 35-57 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 35, 39, 44-48 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fellenstein et al. (hereinafter Fellenstein)(U.S. Patent No. 7,406,691 B2) in view of Barsness et al. (hereinafter Barsness)(U.S. Patent No. 7,379,884 B2), and further in view of Gray et al. (hereinafter Gray)(U.S. Pub. No. 2005/0072618 A1).

Regarding claim 55, Fellenstein teaches as follows:

A method for supporting an application workload (job request from client system 200 in figure 2) using a resource at a remote location (virtual resource 160 in figure 2)(allocating additional resources to a job submitted to a first selection of resources in a grid environment, see, e.g., col. 3, lines 25-36), the method comprising:

assigning a subset of a plurality of server nodes to execute the application workload (grid management system controls distribution of each job to a selection computing systems of virtual resource, see, e.g., col. 7, lines 23-27);

executing the application workload on the assigned server nodes (virtual resource handles the request and returns the result, see, e.g., col. 7, lines 28-31);

monitoring execution of the application workload to determine whether a threshold of a performance requirement of a service level agreement specifying performance requirements for execution of the application workload is met (not meeting performance requirements for a job from client system, then additional resources may be allocated including other resources from external grids, see, e.g., col. 10, lines 1-9);
and

responsive to a determination that the threshold is not being met sending a request for at least one server node at the remote location (if not meeting the performance requirement, then additional resources may be allocated including other resources from external grids, see, e.g., col. 10, lines 1-9).

Fellenstein does not teach of specifying a number of nodes requested, a time duration for which the requested nodes are needed, and a dollar value associated with the request.

Barsness teaches as follows;

A number of nodes requested (estimates the resources that are needed to complete the request within the required completion time, see, e.g., col. 9, lines 1-5);

a time duration requested (required completion time for the request in the customer's service contract, see, e.g., col. 7, lines 9-13); and

a dollar value associated with the request (determining a price to be charged for performing the request based on the amount of time, see, e.g., col. 2, lines 36-39).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein with Barsness in order to efficiently assign available resources in the grid environment based on the requested job characteristics.

Fellenstein in view of Barsness do not teach of adjusting the threshold to provide an adjusted threshold for a further threshold determination whether the adjusted threshold is met in order to prevent oscillation between increasing and decreasing the number of server nodes.

Gray teaches of a dynamically adjusting a threshold which adjustments effectively increase the separation between the detected weight and the threshold, minimizing oscillation of the determined characterization following an initial occupant characterization (see, e.g., abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein in view of Barsness with Gray in order to effectively minimize the oscillation of the determined characterization.

Regarding claim 35, Fellenstein teaches as follows:

a first application workload executes on a first server cluster (GM 504 in figure 5) having a first domain (local grid) and the remote location (GM510 or GM 520 in figure 5) includes a second domain (grid A or grid B in figure 5) having a second server cluster running a second application workload further comprising:

monitoring execution of the first application workload to determine whether the performance requirements for execution of the first application workload specified in the service level agreement will continue to be met (not meeting performance requirements for a job from client system, then additional resources may be allocated including other resources from external grids, see, e.g., col. 10, lines 1-9); and

responsive to a determination that the performance requirements for execution of the first application workload will not continue to be met, sending a request to the second domain to assign one or more of the plurality of server nodes in the second server cluster at the second domain to the execution of the first application workload (if not meeting the performance requirement, then additional resources may be allocated including other resources from external grids, see, e.g., col. 10, lines 1-9).

Regarding claim 39, they are rejected for same reason as presented above per claim 55.

Regarding claim 44, Barsness teaches as follows:

The dollar value associated with the request is a payment amount for the number of server nodes requested (determining a price to be charged for performing the request based on the amount of time, see, e.g., col. 2, lines 36-39).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein in view of Gray with Barsness in order to efficiently assign available resources in the grid environment based on the requested job characteristics.

Regarding claims 45-48, Fellenstein teaches multiple computer systems managed to provide resources (see, e.g., col. 4, line 65 to col. 5, line 51 and 100 in figure 1), which are capable of running any applications including stock trades as a transaction application and optimization of a stock portfolio as a parallel application.

Regarding claim 54, Fellenstein teaches as follows:

monitoring one or more of a transaction rate, a transaction response time, availability of a server node, and utilization of a server node (the resource monitor execute performance check that surveys the performance of available resources, see, e.g., col. 11, lines 58-67).

Regarding claim 56, Gray teaches adjusting the threshold in accordance with a time parameter (see, e.g., page 2, paragraph [0012]).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein in view of Barsness with Gray in order to effectively minimize the oscillation of the determined characterization.

Regarding claim 57, Fellenstein teaches reclaiming a server node assigned to the execution of the first application workload for an assigned time duration (specifying

eligibility for resources based on the job priority so the high priority job can take the most resources, see, e.g., col. 14, lines 21-34).

Fellenstein does not explicitly teach reclaiming prior to the end of the assigned duration.

Barsness teaches that resources can be taken away from other requests (see, e.g., col. 9, lines 31-45).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein with Barsness in order to take away resources from current request based on the priority given for each job request.

5. Claims 43 and 49-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fellenstein et al. (hereinafter Fellenstein)(U.S. Patent No. 7,406,691 B2) in view of Barsness et al. (hereinafter Barsness)(U.S. Patent No. 7,379,884 B2) and Gray et al. (hereinafter Gray)(U.S. Pub. No. 2005/0072618 A1), and further in view of Elleson et al. (hereinafter Elleson)(U.S. Patent No. 6,459,682 B1).

Regarding claim 43, Fellenstein does not explicitly teach of the dollar value associated with the request is a penalty specified in the SLA.

Barsness teaches of determining a price to be charged for performing the request based on the amount of time (see, e.g., col. 2, lines 36-39).

Fellenstein, Barsness and Gray do not teach the penalty parameter on SLA.

Elleson teaches that specifying the action to be taken when traffic belonging to this service level is found to be in violation of an assigned traffic rate and the action

could take the form of dropping packets, downgrading packets to a different server level and so on (see, e.g., col. 8, lines 52-58).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein, Barsness and Gray with Ellesson in order to charge differently when the traffic violates the current SLA.

Regarding claims 49-53, Fellenstein teaches of performance specification including quality of service specifications compiled from service level objects and agreements (see, e.g., col. 10, lines 38-43).

Fellenstein and Barsness and Gray do not teach of specifying SLA including throughput, response time, availability, downtime and penalty function.

Ellesson teaches the well know SLA includes the claimed limitations (see, e.g., col. 1, lines 37-55).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein, Barsness and Gray with Ellesson in order to efficiently monitor the performance of an network as measured against multiple SLA agreements

6. Claims 36-38 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fellenstein et al. (hereinafter Fellenstein)(U.S. Patent No. 7,406,691 B2) in view of Barsness et al. (hereinafter Barsness)(U.S. Patent No. 7,379,884 B2) and Gray et al. (hereinafter Gray)(U.S. Pub. No. 2005/0072618 A1), and further in view of Sankaranarayan et al. (hereinafter Sankaranarayan)(U.S. Patent No. 6,799,208 B1).

Regarding claims 36-38 and 40-42, Fellenstein in view of Barsness and Gray teach all the limitations of claims except for receiving a counter off, sending a response indicating acceptance or rejection of the counter offer, and receiving refusal by denying the request (the examiner interpreted as communications between the resource requestor and the resource providers regarding allocating available resources based on performance requirements and available resources).

Sankaranarayan teaches as follows:

The resource allocation process based on the received request from the application and available resources from the provider (see, e.g., col. 14, line 55 to col. 15, line 54 and figure 6);

the resource manager asks each resource provider identified in the configuration to determine whether it can allocate its resource to the activity (see, e.g., col. 14, lines 60-67 and step 602 in figure 6); and

the resource manager continues successively through each fallback configuration (see, e.g., col. 17, lines 51-64) until finding a configuration that can be satisfied with the currently available resources or discovering that no fallback configuration can be satisfied (see, e.g., col. 17, line 65 to col. 18, line 17).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine Fellenstein, Barsness and Gray with Sankaranarayan to include negotiating method between the resource requester and the resource providers as taught by Sankaranarayan in order to efficiently allocate the available resources to the resource requester based on the availability of resources at the time of requests.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEONG S. PARK whose telephone number is (571)270-1597. The examiner can normally be reached on Monday through Friday 7:00 - 3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. P./
Examiner, Art Unit 2454

December 10, 2008

/Dustin Nguyen/
Primary Examiner, Art Unit 2454